SECOND SERIES. No. 21.
JUNE, MDCCCLXVII.

THE ZOOLOGIST:

A Monthly Journal
OF
NATURAL HISTORY,
FOR
RECORDING FACTS AND ANECDOTES
RELATING TO
QUADRUPEDS, BIRDS, REPTILES, FISHES AND INSECTS.

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List of Birds noticed in East Finmark, with a few short Remarks respecting some of them.

By CH. SOMMERFELDT, Parish Priest of Næsseby. Translated and communicated by H. E. DRESSER, Esq.

(Concluded from Zool. S. S. 700.)

NOTES.

1. *Aquila fulva.*—Not common, for though I have had means of seeing many eagle-skins I have never seen but one of this bird. The bird in question was caught in a steel trap at West Tana. In 1858, on the 4th of May, two eggs were brought to me from Lerpollen on the Tana. The ground colour was dirty white, with a pale violet-gray tinge, the one without brown spots, the other covered with larger and lesser brown spots, chiefly at the pointed end. On the 25th of April, 1859, one egg was taken from the same nest: this one was without brown spots, and less in size. The largest was 68 mm. in length, 55 mm. in diameter; the least 64 mm. in length, 50 mm. in diameter.

2. *Pandion haliæetus.*—Breeds at Karasjok, Alten and Enare, possibly also in the pine forests on the South Varanger and the Tana River, where it is well known both to the river Lapps and the fell Lapps. In the summer of 1855 I saw it at Polmak.

2 *b. Buteo lagopus.*—Is included as a resident, as Nordvi states that he has seen it during the winter at Mortensnæs, and skins have been brought to the "Fogde" at Karlebotten Fair in December, and at Polmaks Assizes (Thing) in February, with a statement that the birds had been caught in ptarmigan-snares. In 1853 I first observed them commonly in April at Nyborg. The snow covered the ground completely, but many lemmings were to be seen along the fjord.

3. *Falco gyrfalco.*—The commonest of the falcons occurring here. It nests at several places, as, for instance, at the Polmak Lake, on a mountain near Leibenjarg, at Polmak, at Meskelf and Beralvakke in Næsseby, at Ekkerö near Vatsö. Its eggs, four in number, light brown, marked with small dark brown spots, particularly towards the larger end, get lighter as incubation proceeds, so that shortly before they are hatched they are almost clay-yellow without spots. They are hatched about the 20th of May. In length they are 55 mm., in diameter 41 mm. It is not unusual for this bird to be, in the winter, found hanging in the ptarmigan-snares, as is also the case with F. palumbarius and F. lagopus.

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4. *F. peregrinus.*—Is not with certainty known to breed in East Finmark. The eggs that Nordvi possesses were brought by a Kvæn-Lapp, who lives in South Varanger, and they may thus possibly have been taken in Norwegian territory. The eggs are whitish brown, with brown dashes and darker spots, which on the one are collected at the pointed end, the remainder of the egg being almost white. In the autumn it is often seen at Mortensnæs, but must be reckoned amongst our rarer birds.

5. *F. lithofalco* (*æsalon*).—Lays four or five eggs, either in the fells or on the ground in steep hills, or in trees not only towards the south and west, as Malm states, but also equally often towards the east. The eggs are, directly after they are laid, pretty violet-red with reddish brown spots, but after a day or two have passed they take their reddish brown ground colour with dirty brown spots. It lays an egg every other day. Some years it is very common, others very scarce. It arrives early in May and leaves early in October. It has difficulty in clutching its prey on the wing.

6. *Astur palumbarius.*—Breeds at Enare: it is seen sometimes, and perhaps breeds, at South Varanger.

7. *Strix nyctea.*—Is sometimes, when lemmings are plentiful, found very commonly; thus in 1853 and 1854; otherwise it is occasionally seen every year. It breeds, on the Varanger Næsset and the fells between the Tana and Lebesby, either on rubble or tussocks in large mosses. In the latter case it always chooses the largest tussock. In May, 1859, a sea Lapp found a nest in a steep precipice about a mile (Norwegian) above Karlebotten. When he found the nest there was but one egg in it. Having informed me of it and been told to let the place remain unvisited for a couple of weeks, he still went there earlier and found five eggs. In order to see if the owl had begun to sit, or if it could be expected to lay more eggs, he took an egg and put it in water. As the egg sank to the bottom he placed it again in the nest, but on his visiting the place, after a few days interval, all the eggs were gone. The fell Lapps tell me that the snowy owl always removes its eggs when anyone has touched them.

8. *S. lapponica.*—Occurs at Enare, from whence it sometimes moves northward after lemmings. In 1853 it has been shot at Polmak. It may be named here as worthy of note that a Lapp owl, which in the autumn of 1854 remained at Tana, bit the year's shoots off the birch-trees, so that the ground under the trees was quite covered with the twigs thus bitten off. When thus employed it seemed to go eagerly

to work ,and, if the branch bent under its weight, would hang with its head downwards and bite round about. In Enare, from where Mr. Wolley has its eggs, it is said to build its nest in the densest thicket in the forest, rather high up in a tree.

9. *S. bubo.*—Has only been once observed in East Finmark, when one was shot at Lebesby, in the winter of 1852-53. It was then found sitting on the rocks.

10. *S. brachyotus.*—Is often seen in East Finmark, but has not been known to breed there. Possibly it may, however, breed in South Varanger during lemming years. I have five eggs of this bird from Karasjok.

10 *b*. *Cuculus canorus.*—Is not seen every year.

11. *Upupa epops.*—Has been once shot on the Finland side of the Tana River, near Utajok: a male at Polmak, in September, 1849, according to Nordvi.

12. *Sturnus vulgaris.*—A single specimen was shot on the 5th of April, 1847, at Vardö; another was found dead at Nyborg in December, 1866, after having been about there during a month's time. The latter was a young bird, and had probably strayed from the eastward, where it is said to occur.

13. *Corvus pica.*—Is seen singly now and then, more especially in the autumn. It breeds at Hopseidet, and in former times it has bred at Tana. Those that occur are almost immediately killed by the Lapps, who will not be disturbed by its chattering, believing that it forbodes misfortune.

14. *Garrulus infaustus.*—Occurs rather commonly, during the winter near habitations, during the summer more in the forest. In the spring it fetches food for its young, chiefly from the rein-deer flesh hung out to dry or from offal that has been thrown out. It is not known to eat carrion. It is not at all shy, and is therefore often caught in the snares which are set by the Lapps. When on my arrival in Finmark I applied to the Lapps, in order to procure its eggs, they all told me that it only bred in the pine forests. I then tried the Karasjok Lapps, and received from there, in the summer of 1852, three eggs, which, however, were near hatching. These were taken in the early part of May. I have since received from the Tana Valley several nests, which were taken in April. The nest is built in out-of-the-way places in a large dense wood; still not always far from an inhabited place, and high up in trees. The foundation and outside of the nest is composed of thin birch and willow-twigs and a few large straws, inside of that are fine straws, and the lining is composed of ptarmigan-

feathers and marsh wool (*Eriophorum*), sometimes plaited with thin juniper bark and a few feathers of the bird itself. Outside it is 8 inches 10 lines by 7 inches 3 lines, inside 3 inches 6 lines by 3 inches. Its eggs, three to five in number, are between 26 and 31 mm. in length and 20 mm. in breadth, differing both in form and size out of the same nest. The ground colour in the new-laid egg is greenish white, with a strong lustre, but soon gets darker, and when kept any length of time they get lighter again and grow almost grayish white. They are covered with grayish brown spots, which lay under and greenish brown ones laying out on the shell and generally collected in a circle round the larger end. In some eggs the larger end is almost covered with these greenish brown spots, so that the egg, from greenish brown at the thick end, gets lighter and almost unspotted towards the pointed end. Others have only large gray-brown spots here and there on the greenish white ground. It sits from the time that the first egg is deposited, which is necessary in spite of the warm construction of the nest, so that the eggs shall not take harm from the severe cold (sometimes 20° R.) that often occurs in April. The bird will not leave the eggs, however much noise is made near it—no! not even when one climbs the tree. It sits drawn up close on its eggs, and when lifted off and thrown on one side tries to get back to the nest whilst one is standing there.

15. *Bombycilla garrula.*—A single bird was seen at Tana, in November, 1851. On the 27th of March, 1852, a flock was seen on the borders of the Tana River at Nuvus. According to Mr. Wolley's statement they breed in the Naale Forest at Anajok, in Finland and near Muonioniska, in the second week in June, and lay three or four eggs. One egg that I received in 1857, from Mr. Wolley, is about as large as the egg of Turdus iliacus, 23 mm. long, 16 mm. broad, but more shapely, is bluish white, with light blue-gray and black spots all over. It much resembles the egg of Sylvia turdoides, which, however, has a greenish white ground colour and several larger brown blotches, and is stouter in shape.

16. *Hirundo urbica.*—Breeds here and there, but, according to Mr. Wolley, there is a colony of these birds in a fjeld at Bögfjord, in South Varanger.

H. rustica.—Is to be seen every year at Vardö, but has not been found breeding.

17. *H. riparia.*—Is not uncommon, and breeds at several places, *viz.* Seida on the Tana River, Nuorgan in Polmak, and at Oxevaudet: at each place several pairs breed. It seems to me that they have been

oftener seen during the last year of my stay in Finmark, and I believe that they have become more numerous of late.

18. *Muscicapa grisola.*—Was found breeding in Polmak in 1856.

19. *M. atricapilla.*—I found this species breeding in a hollow birch stump at Polmak in 1855. The bird sat so close that it only left its eggs when the stump was broken off and fell down. The nest was formed of the thin outside strips of the birch-bark, and contained six eggs. It had nested before in the same stump, as under the nest were found the remains of an old nest of the same materials. Nordvi tells me that he found eggs of this bird in 1860.

20. *Cinclus aquaticus.*—Is found here and there, high up the rivers and near the sea, both in the summer and winter. It lays five white eggs.

21. *Motacilla borealis.*—Is commoner than M. flava. I think I have observed that the nest of M. borealis differs from that of M. flava, the former using finer and fresher yellow straws, apparently of Festuca ovina, which is common in Finmark, whereas the latter uses stouter faded gray grass, straws and leaves, giving the nest the appearance of being old and having been used before. I have, however, yet to decide whether this difference is always the case. Its eggs are not always pointed, as Schrader states in 'Cab. Journal.' I have a nest from Polmak with the eggs almost round. Some eggs have fine black streaks on a gray ground, with light brown spots.

22. *Anthus rupestris.*—Is not uncommon: it arrives in the commencement of April, and is the last songster that leaves in the middle of November. It breeds on the fjords, but not so commonly as on the sea-shore.

23. *A. cervinus*, Pall.—Is common; indeed at many places, such as Meskelf, at Næsseby, at Karlebotten in Polmak, commoner than Anthus pratensis. Its eggs resemble those of A. pratensis, both in form and colour, so much that it is often impossible to decide to which species they belong, the best marked difference being several larger extended spots on the eggs of A. cervinus, which, however, are by no means found on all.

24. *Sylvia trochilus.*—Is one of the commonest of the birds of East Finmark: its covered nest, which is almost always lined with white ptarmigan's feathers, is invariably to be found on the ground, and contains from five to nine eggs. These are generally reddish white, with rust-red spots; still one sometimes finds eggs of this bird that are covered with reddish brown and black spots, in which case they much

resemble eggs of S. abietina: I have a nest of pure white eggs. Sylvia abietina has not been noticed in East Finmark either by Nordvi or myself, nor at Muonioniska by Wolley. Besides, as the above-mentioned black-spotted eggs certainly are those of S. trochilus, the occurrence of S. abietina in East Finmark will as yet be very uncertain.

25. *S. sibilatrix.*—Is named by Schrader as occurring in East Finmark, but this must certainly be an error, as it has not been noticed either previously or subsequently.

26. *S. schœnobænus.*—May possibly have occurred and been overlooked, but has never been shot.

27. *Accentor modularis.*—I received six eggs from Seida in Tanen, which exactly resemble eggs of this species received from Denmark and the South of Norway: as, however, no one has noticed this songster here I will not include it. It occurs at Enare and Muonioniska.

28. *Parus sibiricus.*—This lively bird and Fringilla linaria are the only real songsters found during the winter. Its call-note can be heard almost every year at Nyborg between the 20th and 26th of March. It nests here and there, building in hollow trees to which Picus tridactylus and P. minor have formed an entrance. The nest is formed of green leaf-moss, on the top of which is a thick layer of wool, reindeer hair, but chiefly lemmings' hair. The eggs, seven to nine in number, are glossy white, with violet and reddish brown spots, often collected at the larger end, and they are rather thick in proportion to their length. They resemble eggs of Sylvia trochilus, but when fresh are not so red and are glossier. The spots on eggs of S. trochilus are more numerous, of a deeper reddish brown colour and spread over the whole egg. If one has the nest one can never be mistaken in the eggs. Mr. Wolley found eggs of S. phœnicurus and Parus sibiricus in the same nest. Schrader states that both Parus major and P. palustris occur, the latter not even uncommonly, but neither of them have been noticed by Nordvi or myself.

29. *Alauda arvensis.*—I heard, in 1851, singing at Tana, and the same year found the nest there. I have eggs from Tana that exactly resemble those of A. cristata, and probably are varieties of A. arvensis or A. alpestris.

30. *A. alpestris.*—Occurs commonly, arriving generally in the commencement of May, but in early springs before that. In the spring it seeks its food on such damp places where the snow, in consequence of springs or the damp, thaws early. During the summer it is found on dry sandy places, even where there is very little grass. It nests both

near the sea (for instance, on Angsnæs) and also far from it, and places its nest not always amongst grass and moss, but on the ground amongst the fallen leaves of small birch bushes. It breeds at Gamvik and Berlevaag on the North Arctic Ocean. Its nest consists of straws, and I have never seen one lined with feathers. Its three to five eggs are generally yellow or yellowish gray, with blue-gray and brown spots, which often collect and form a ring round the egg at the thick end. It forsakes its nest and eggs if one merely touches the latter. It sometimes has two broods; thus the eggs have been found at Mortensnæs on the 12th of May and in July. On the other hand, it has never been noticed breeding as late as August, when Malm visited Varanger. The name "sandlærke," stated by Malm to be used in East Finmark, has not been heard of by Nordvi or myself. Its Lapp name is worth noticing, it being called by the Lapps who take notice of the birds (and they are not few who do so), "Ruoscha alap" (Russian snow bunting), it coming to East Finmark from the east, and being often noticed amongst the snow buntings in the spring.

31. *Emberiza citrinella.*—I noticed this bird at Tana, seeking food for its young. Otherwise it is only seen singly during the seasons of migration, at Nyborg and Mortensnæs.

32. *E. rustica.*—Has not been found in East Finmark, either by Mr. Wolley, Nordvi or myself, although Wolley specially sought for it, and I have every spring a good chance of noticing outside my windows a quantity of spring birds (Emberiza schœniclus, E. lapponica, Alauda alpestris, Anthus pratensis, A. rufogularis and A. rupestris), when collected near some water during snowy weather, but amongst them I have never noticed E. rustica. Both Nordvi and I have small eggs similar to those described by Schrader, but one was found in a nest of E. schœniclus. E. pusilla has not either been noticed, though Schrader includes it.

33. *E. lapponica.*—This bird, with Sylvia suecica, S. trochilus, Turdus iliacus and Anthus cervinus, are the best songsters in East Finmark. It lets its clear, full song be heard when fluttering it raises itself high in the air and again descends, but it discontinues when the bird has descended somewhat, and with closed wings drops in a slanting line on some raised object. It will not allow another of its species near its nesting-place, and one may therefore see the males pursuing each other during the spring. It places its nest, which is lined with feathers (though sometimes there is scarcely a stray one) on a tussock amongst small weeds. Its eggs, from four to six in number,

vary, but when new-laid have generally a greenish tinge, and some are light green with dark brown spots, chiefly at the larger end. These eggs, like those of Anthus pratensis and A. cervinus, get darker as they are incubated—as the veins in the egg become developed; thus one finds in the same nest eggs light green and olive-green or yellowish brown.

34. *Fringilla domestica.*—A single bird is now and then noticed here, still it has not settled either at Vardö or Vatsö. In 1855 I saw four F. montana: they were collecting feathers for their nests, but though I sought carefully for these I could not find them.

35. *F. flavirostris.*—I do not wish to include this bird, as I am not certain that it occurs here. Dr. Kjærbölling certainly determined some eggs sent him to be those of this species, but I consider it an impossibility to distinguish the eggs of these two species in a collection; anyhow, some eggs of F. linaria that I myself took are so like those said to be of F. flavirostris that anyone would say that they had come out of the same nest.

36. In the autumn I have at Tana seen, amongst flocks of F. linaria, also F. canescens, which was larger, lighter in colour, and thus easily distinguished when seen together with F. linaria. It is uncertain whether it nests in East Finmark, though not improbable. Dr. Kjærbölling has determined eggs sent to him to be of this bird.

37. *Pyrrhula erythrina.*—I myself have not seen this species, but Nordvi named to me that he and Schrader saw it one spring at Nyborg, on the Varanger Fjord. I have eggs from Polmak that resemble those of P. vulgaris, but are darker green, with reddish brown-violet spots, and as the finder stated that the bird resembled Anthus pratensis it is possible that these eggs belong to P. erythrina. The nest consisted of straws, fine twigs and moss, lined with hair and Eriophorum wool, much resembling the nest of F. linaria, only larger.

39. *Loxia curvirostra.*—In June, 1859, one was caught at Karlebotten, near the shore, where it was seeking food. In July, the same year, another was shot at Markjok, one of the tributaries of the Tana River. It is said to be not uncommon at Enare, and possibly also occurs in the pine forests at South Varanger.

39. *Columba turtur.*—Was shot at Vatsö some time ago, and later one has been noticed at Vardö.

40. *Tetrao urogallus.*—Is found breeding at South Varanger, and single birds are found in the autumn at Tana. In Enare it is common, and when the frontier was closed served, to a considerable extent, to supply the inhabitants with meat.

41. *Charadrius helveticus.*—Malm states that he has seen this species at Veinæs, which may mean a place to the eastward of Berlevaag, on the Arctic Ocean. Neither Nordvi, Wolley nor I have ever noticed it.

42. *Grus cinerea*, which, according to Wolley, breeds at Muonioniska, has, according to Nordvi, been once shot at Utsjok, and has been noticed at Varanger in the autumn.

43. *Tringa islandica.*—At Vatsö Mr. Wolley purchased a skin of this bird: it was said to have been shot in the neighbourhood. I have seen it on the fells between the Varanger Fjord and Tana River, in June. An egg sent by Nordvi to Kjarbolling was determined by the latter to be an egg of T. islandica. It is, however, one of our rarest waders.

44. *T. minuta.*—Is seen in the spring on the Tana River, in the autumn on the Varanger Fjord, in company with the other Tringæ.

45. *T. maritima*, which is of common occurrence, is found breeding at Berlevaag, on the North Arctic Ocean, and probably breeds at many places in the interior of the Varanger Peninsular.

46. *T. alpina.*—Occurs not only on the higher fell mosses, but is found breeding in June almost on a level with the sea. It arrives in the middle of May.

47. *T. Schinzii.*—Professor Nilsson observes, and very rightly, that it is curious that Schrader has found this bird breeding in East Finmark, for it has never been observed by Wolley, Nordvi or myself.

48. *T. platyrhincha.*—Mr. Wolley found eggs of this bird at Muonioniska. The eggs that I have received from him are very glossy, and of the size of small eggs of T. alpina. The ground colour is whitish brown with a brown shade, with larger and smaller brown blotches, and a few black spots on the larger end. It may occur in East Finmark, though it has not been noticed. This may also be the case with T. subarquata.

49. *Calidris arenaria.*—Schrader states, in 'Cabani's Journal,' that he found eggs of this species. Neither Nordvi nor I have ever seen the bird, and Schrader's statement is the more peculiar, for the reason that he never mentioned to Nordvi (who, living in the neighbourhood of the place he stayed at, often saw him and accompanied him on several journeys) that he had found the eggs of this bird. Possibly the eggs that he states to be those of C. arenaria—light green with blood-red blotches—may be varieties of Totanus glareola; anyhow there are some eggs in Nordvi's and my collections belonging to this latter bird

that answer to Schrader's description. For the present, therefore, C. arenaria should be struck out of the list of the birds of East Finmark.

50. *Machetes pugnax.*—Arrives early in June, but is not very common. I have often had an opportunity of watching the males in the spring through a telescope, at a short distance off,—thirty to fifty ells,—but they never fought. I have certainly seen two males rush at each other with open bills, but the one has then laid down and the other put its bill on its head, neck or back, and in this position they would remain quiet for some time. The females in the meantime walked about quite peaceably.

51. *Totanus fuscus.*—Is found commonly in Enare, and is not uncommon along the Tana River, particularly in its upper valley. It is seen at Nyborg in the autumn. Kjærbölling describes its egg as shorter, stouter and more reddish brown than the egg of T. calidris: this is, however, wrong. The four eggs I have received from Mr. Wolley are bright grass-green, with larger and smaller brown patches, and are larger and more elongated than the eggs of T. calidris.

52. *Limosa rufa.*—In June, 1857, I saw a flock at the confluence of the Varanger Fjord, and late in July and August I have often seen both this bird and Limosa melanura at Vardö. It is never found breeding here, but is at Muonioniska. Possibly it breeds in the fell mosses of Varanger Næsset, but it is more probable that its breeding places are further to the eastward, and that it only visits East Finmark when migrating.

53. *Scolopax gallinula.*—Of this bird I got from Karlebotten, in 1857, four eggs, which are larger than the eggs of Tringa alpina, highly polished, gray, with dark brown spots. In June, the same year, I noticed it at Nyborg, and heard its sounding flight, accompanied with the same bleating sound as Scolopax gallinago makes, and from which it has got its Lapp name, "the bleater," and the sound was scarcely much softer.

54. *Phalaropus rufus.*—Has been seen several times by Nordvi at Mortensnæs, towards the end of August, in summer plumage, swimming about on the sea near land. At Nyborg it has been shot in winter plumage in October. It has not been observed here during the breeding season.

55. *Fulica atra.*—Two specimens of this species were shot at Vardö in October, 1857, both young birds; probably they had strayed there from the eastward. It has been certainly told me that long ago it has

been found breeding on a large lake (Oxevandet) near the confluence of the Varanger, but I have never seen it here.

56. *Procellaria glacialis.*—Is seen now and then during the whole year, but does not breed here. It is so fearless that it flies down to the fishermen's boats, and sits quietly in order to get the liver of the fish caught. It takes greedily pieces of liver thrown out, and eats so much that it cannot fly up, and is thus often taken with the hand.

57. *Larus eburneus.*—Occurs now and then in the autumn and winter, particularly after a storm from the north.

58. *L. tridactylus.*—With regard to this and the other species of gulls I will name what has been noticed by Nordvi and myself at Varanger and the Tana, and by the commandant at Vardöhus, Scharffenberg, who takes great interest in Natural History. L. tridactylus arrives generally in May and leaves in September. At the confluence of the Varanger Fjord I have often had an opportunity of seeing flock after flock come from the eastward, and at the confluence rise up to get so high in the air as to be able to continue their flight towards the west over the Seida Fell. Generally this has been when a strong west wind was blowing. It does not breed in Varanger, but at Tana out towards the sea, and at Vardö.

59. *L. canus.*—Is commonest during the winter. It lays two or three eggs in all parts, on small islands, in fresh-water lakes, often near the sea, but also far from it,—as, for instance, at Suke and Bonakas,—and generally breeds in single pairs.

60. *L. argentatus.*—Breeds both at the sea and at fresh water, up the fjords, in single pairs, but at Vardö and other places in quantities. I have, for a couple of years, received from Commandant Scharffenberg, of Vardöhus, eggs, probably of this bird, which are light red, covered with red spots all over. It is stated that there are only two or three pairs that lay these eggs on Renöen.

61. *L. leucopterus.*—As to whether this bird breeds in East Finmark is not altogether decided, but it is said to breed on Renöen, near Vardö. It is not rare.

62. *L. glaucus.*—Is said to breed on Renöen, near Vardö.

63. *L. marinus.*—Breeds both near the sea and fresh water—as, for instance, Bonakas at Tana. Scharffenberg states that it is not the first gull that lays its eggs at Vardö, as it lays a week or ten days after L. canus has commenced to lay.

64. *L. fuscus.*—Breeds at Vardö. It may be a misunderstanding of Schrader's notes, when Pastor Pässler (Cabani's Journal) states that

neither this gull nor L. argentatus breeds so high in the North. As regards the construction of their nests, the gulls in East Finmark always use grass straws for the scanty foundation of their nests when such is to be got, and not sea-weed or sea-grasses.

65. *Lestris catarrhactes.*—A specimen of this bird was shot at Sværholt, and brought to Lebesby Assizes, where the man who shot it demanded head-money for it, as both there and at Tansö it had done great injury amongst the eggs and young birds.

66. *L. pomarina.*—Is seen every spring and autumn in the fjords, and about the end of July I have seen them flying down the Tana Valley. The fell Lapps insist that it breeds on Varanger Næsset (Varanger Promontory), some little distance up from the sea, partly on tussocks in the mosses and partly in the fells (?). I have received an egg from Gamvik which is precisely like an egg of L. pomarina which Nordvi has received from Hölbölt from Greenland. It is not improbable that my egg is of this bird, as it is seen at Gamvik the whole summer.

67. *L. parasitica.*—Breeds on the sea-coast, but not so far in the fjords as at Varanger. At Vardö and Svartnæs single pairs breed yearly. This bird, as well as L. crepidata, varies in colour, but to suppose that the difference of colour is in consequence of difference of age or sex is scarcely right: anyhow, I have seen pairs of L. crepidata light-coloured alike, and pairs where the one was dark-coloured far forward on the breast, and the other almost entirely light-coloured underneath. Mr. Wolley noticed the same in several pairs of L. parasitica near Vardö. Some pairs were almost entirely gray underneath; in another one was light and the other dark, and in a third both were light-coloured underneath.

68. *L. crepidata.*—Occurs in the fjords, but is also seen on the sea-coast. Its commoner or rarer occurrence seems partially to depend on the lemmings; anyhow, in 1853 and 1854, it was found in numbers, and during the summer subsisted chiefly on these animals: since that it has occurred rather seldom. In East Finmark it does not breed in company with others, and it is seldom that more than one pair are found on the same moss. It lays one or two eggs, which are highly polished and tapering towards the pointed end. In the spring it pursues the kittiwake as eagerly as L. pomarina, in order to steal its prey from it, but is itself a diver, and therefore is often caught in traps; however, it seems to prefer pursuing others to seeking its food by diving. With regard to the nesting-places of the several skuas in

East Finmark, I can, from Nordvi's and my own observations, and information received from others, state as follows:—L. pomarina breeds inland, a short distance from the sea—as, for instance on Varangernæsset. L. parasitica on islands in the sea and rather dry places on the mainland, but does not go far up the Varanger Fjord, whereas west of Vardö it seems to take the place of L. crepidata. L. crepidata in mosses and on islands in the fjords and in fell mosses up the larger rivers: thus Mr. Wolley found them breeding rather far up the Tana River, as also it is found at Karasjok: the number of lemmings and field mice may have some influence on its choice of a breeding-place. It is to me incomprehensible how birds so common as L. pomarina and L. parasitica can have been unobserved by Schrader.

69. *Anser minutus.*—Is chiefly found at Galbokjok, a tributary of the Tana River. From thence Nordvi received twelve young ones one autumn, which he tried to domesticate; he did not, however, succeed.

70. *A. cinereus.*—Occurs in the autumn here, and is said to breed at Tamsö, in West Finmark. A. arvensis and A. segetum are found, however, yearly breeding at several places.

71. *A. torquatus.*—Occurs both in the spring and autumn, migrating to and from Spitsbergen, where it breeds.

72. *A. leucopsis.*—Has been shot at Angsnæs, in Næsseby.

73. *Anas tadorna.*—Has, according to Nordvi, been shot several times at Karlebotten, in Varanger.

74. *A. penelope.*—Of this duck both pure white and pretty yellowish white eggs are found.

75. *A. fuligula.*—Is found breeding at Enare, and possibly also in South Varanger.

76. *A. marila.*—Is certainly not, as Schrader states, common. The only place in East Finmark where it is known with certainty to breed is on the Polmak River.

77. *A. leucophthalmos.*—Nordvi got some small yellowish white polished eggs from Enare, and sent them to Kjærbölling, who decided that they were those of this bird. The down was not brought with them, and it must be considered very uncertain as to whether these eggs are really those of this southern species of duck.

78. *A. clangula.*—Is found but seldom on the Varanger Fjord, but is common on the Tana River. A. clangula, Mergus merganser and M. serrator breed in hollow trees, and in order to come into possession of the eggs of these birds in the easiest possible manner the

Lapps put up, along the Tana River and in the woods, hollow trees, about two ells high, with a hole in the side. They generally succeed in getting one or another bird to lay eggs in them, and often three birds use the same trunk; thus M. merganser, M. serrator and A. clangula: indeed Mr. Wolley has found the eggs of Strix funerea and A. clangula in the same trunk. When the bird has discontinued laying eggs the Lapps empty the nest.

79. *A. glacialis.*—On the 19th of June, 1855, a male of this species was shot on the Polmak River, the change of plumage of which at this time of the year was peculiar, *viz.* head nearly white; neck, breast and belly in complete winter plumage; back in summer plumage; the long hanging wing-covert feathers white, excepting the two farthest back, which were grayish brown. The Lapps declare that those that winter here keep their winter plumage until late in the summer, whereas those that come from the south have donned their summer plumage when they arrive.

80. *A. Stelleri.*—Is found here throughout the year up in the fjords, more especially towards the spring, but further out towards Vardö—as, for instance, at Skal River and Koma River—in the summer. Its eggs have never been found here, but I have heard from Lapps who have remained on these rivers for the summer fishery, that this bird is supposed to breed there. I have also heard it stated that it breeds to the eastward, in Russian Finmark. That this bird's eggs are brought *commonly* by Russian fishermen and skippers to the traders at Vardö must, however, most distinctly be denied, and Schrader's statement may probably be founded on what has often been named to me, *viz.* that a Russ is said to have *once* brought eggs to Vardö which *he* stated and Schrader acknowledged to be those of A. Stelleri. Nordvi in particular has had every year a good opportunity of seeing quantities of the eggs the Russians bring, but these eggs have been, almost without exception, those of Lari, Mergus serrator, Mormon fratercula, Anas mollissima, Uria grylle and Sterna. I will not deny that it breeds either in East Finmark or in Russ-Finmark, but it is certainly most rare, and found in pairs singly, and the information respecting it is most untrustworthy. Thus Nordvi has received from South Varanger eggs of Mergus serrator which were said to be those of A. Stelleri: at Vatsö I have seen eggs of A. glacialis said to be those of this bird. On the 10th of May, 1858, I received two males which were much lighter coloured than the young males I had before obtained, and which were like females, excepting that the chin was black and the wing-covert

feathers more curved. These two young males, shot in May, were nearly white at the bill, the head light grayish brown, the green topknot distinct, the black ring on the neck distinctly marked, below this a ring of chequered black and white feathers, the fore part of the breast almost pure brown; on the fore part of the wing a spot almost pure white, and one of the long curved wing-covert feathers half white and half blue. These were probably males in their second spring plumage. In April, the same year, I received young males which were altogether similar in colours to the females,—scarcely larger,—and also old males in their magnificent winter plumage.

81. *A. mollissima.*—Does not occur in any great numbers in the Varanger Fjord during the summer, as the Lapps shoot the bird and take the eggs. A few pairs, however, breed yearly there. It does not always nest near the sea; thus, in 1852, five eider duck's eggs were brought to me from near a lake at Rodbjerget, on the Tana River, about half a (Norwegian) mile from the sea. On the 7th of July, 1859, a pair, male and female, were seen at Næsseby, and in 1856 males, in company with females and recently hatched young, were seen at Andersby, near Vatsö.

82. *A.spectabilis.*—Is not a common bird in East Finmark. Schrader certainly states, but scarcely with any foundation for such a statement, that it is found in numbers in the Varanger Fjord in October. It is true enough that in October and November the eider ducks collect in large flocks, and fly about over the fjord and the country near the fjord, in the afternoon and the dusk of the evening, but in these flocks A. mollissima constitutes the chief portion; A. Stelleri is also found in large numbers, but A. spectabilis only singly in proportion to the other flocks.

83. *Graculus carbo* (*Carbo cormoranus*).—Is found along the Tana River up to Karasjok. It breeds both on the rocks and on low islands, as, for instance, on Skarholmen in the Tana Fjord. When it leaves the rock where it is sitting it flies down in a curve to the surface of the water, and rising again when its wings have touched the water flies thus away. This is its general habit, and I have very seldom seen it go down from the rock and swim away. On the 28th of August, 1858, a pure white specimen was shot at Fjelbena, in Tana.

G. cristatus.—Keep to the sea and is there common.

84. *Colymbus arcticus.*—Is probably not found every winter in East Finmark, but in the winter of 1858-59 several of these birds were seen at Karlebotten.

85. *Podiceps arcticus.*—Is, so far as I know, only accidental in Finmark, but it is said to breed at Enare. I have had an egg from Spitzbergen, which probably is that of a Podiceps.

86. *Uria troile.*—Of this species the three forms are found: Uria ringvia seems to be the commonest. In the winter of 1857-58 they were in vast numbers in the Varanger Fjord: Uria ringvia then predominated largely.

87. *Mergus serrator.*—Remains in East Finmark in mild winters. It was seen in Karlebotten in the winter of 1858-59.

88. *Alca impennis.**—One specimen at Vardö, April, 1848 (*vide* Nilsson's 'Fauna,' 5th edition, ii. 571.)

During my stay in East Finmark I tried to make a complete and large collection of the eggs of the birds occurring there, and made use of the Lapps to do so. At first it often happened that I had no further information than such as the Lapps gave me. As however the Lapps know all the commoner ducks well, and have fixed names for them, one could place reliance on their statements, but it also happened that nests were found, and the Lapps did not see the birds, and then I had no means of distinguishing between the eggs of, for instance, Anas glacialis and A. acuta, Mergus serrator and A. marila, as also I have of late often seen small eggs of A. boschas that could be taken for those of A. acuta, and larger ones for varieties of M. serrator. Mr. Wolley was the first to call my attention to the fact that in the down of the ducks one had a reliable mode of determining the eggs, as the down of different species differs. Lately the Lapps have always to bring the down with the eggs, and I will give a description of the down of such ducks as I have had an opportunity of examining.

A. *Anas clangula.*—The very thin light down is white. The centrum pure white. Rami rather long, white, with a slight gray tinge towards the points. The radii are not long, and lay rather close.

B. *A. glacialis.*—The rather thick and close down is blackish gray, like soot, with a light centrum, and consists of larger and smaller down. The smaller down has the centrum light gray and the rami light blackish gray right out to the point. The larger down has the centrum light blackish gray; the rami dark blackish gray out to the point; the radii long, standing out almost at right angles.

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* The late Mr. Wolley made particular inquiries respecting this specimen, the result of which was that he considered that the bird shot could not have been Alca impennis. (*Vide* 'Ibis,' 1861, p. 377.)—*H. E. D.*

C. *A. acuta.*—The rather large, thick and close down is light grayish brown with white centrum, making the white point of the rami appear indistinct; the centrum is quite pale brownish white; the rami gray towards the light centrum, shaded outwards with light grayish brown, the outer point being white; the radii rather long and standing out.

D. *A. Penelope.*—The large and not close down is dark grayish brown with a light centrum, but the white points are clearly visible; the centrum is grayish white; rami rather long, dark grayish brown, with a white point of rather more than one line in length; the radii long and sticking out, and not laying close. This down has, therefore, some resemblance to that of A. acuta, but is darker, and the long white points clearly seen.

E. *A. crecca.*—The short but close down looks grayish brown, with white spots on the ground of the white centrum and white small down. The lesser down has the centrum white; rami grayish brown; the white radii at the centrum rather close, whereas the brown radii are over one line long and placed rather apart from each other.

F. *A. nigra.*—The fine but thin down (taken off a bird shot in June) is very light with a reddish gray tinge; the centrum is white; the rami rather long, white with a reddish gray tinge and light gray point; the radii are very short and stand out almost at right angles.

G. *A. fusca.*—The down (taken off a bird shot in June) is dark with light gray spots; the centrum light brownish gray; rami rather long, dark grayish brown with light gray points.

H. *Merguss errator.*—The short but rather thick and close-hanging down is light blue-gray; the centrum light gray, almost white; the short rami light blue-gray with quite short light gray points; the radii light blue with gray points, giving the whole down the appearance of being strewn over with meal-dust.

IN consequence of the above paper Mr. Sundevall stated that Mr. A. G. Nordvi, of Mortensnæs, in East Finmark, was kind enough last year to write and give him information respecting the birds of that country, which, though not so complete as that furnished in Mr.

Sommerfeldt's paper, still on the whole agrees with it. This information has on a former occasion been spoken of by him at the Academy, and to some extent made use of by Mr. Sundevall, in his work on Swedish birds. Of the species included by Mr. Sommerfeldt one or two are not mentioned by Mr. Nordvi; but, on the other hand, this gentlemen includes two which are not named in the above paper: these two are—

Parus borealis, which is said to be found during the whole year on the Varanger Fjord, and

P. ater, of which two specimens were said to have been seen a long time ago, and one on the 12th of September, 1859.

H. E. DRESSER.

On the History and Habits of the Roe-deer.

By EDWARD R. ALSTON, Esq.

OF few common European species is less generally known than of the roe-deer (*Cervus capreolus*, Linn.)—a species which, for beauty grace and agility, is perhaps unsurpassed by any other northern quadruped. Even in Prof. Bell's excellent 'History of British Quadrupeds' the account of the roe is neither exhaustive nor altogether correct, and the remarks of Mr. Macgillivray ('Naturalist's Library,' vol. xvi.) are not much fuller. I therefore make no apology for having gathered all I have been able to learn from authentic sources as to the life-history and habits of this most interesting species.

The roe-buck reaches a height of about thirty inches at the shoulder, and his average "clean" weight (that is, after being bled and disemboweled) is in Scotland about thirty-five pounds, though fine bucks often attain a weight of from forty to fifty pounds, or even more. In summer his coat is coarse and of a reddish cast; this is changed in September or October for a winter suit of much finer texture, and of a peculiar yellow-gray tint, each hair being gray towards the root and tipped with pale yellowish fawn. At this season I have observed that roe-deer from the Highlands are of a lighter and purer gray than those killed in the Lowlands. At all times the lips are marked with pure black and white, the buttocks are white, and the lower parts and inside of the limbs pale yellowish fawn. Albino roe are sometimes killed: I have seen the skin of one in the collection of the Markgrave of Baden, at Zwingenburg Castle, on the Neckar; and a few years ago a beautiful example occurred near Luss, on Loch Lomond; it was protected for some time, but perished during severe weather, and is now preserved in the collection of Sir James Colquhoun. The fawns, like those of most deer, are beautifully marked with white spots, arranged in lines along the flanks.

The history of the reproduction of the roe-deer has long been a puzzle to German naturalists and sportsmen. The old story, which has been adopted by almost every English writer, was that the rutting season was in November and December, and that the doe went five months with young. But it has long been known by continental observers that the buck seeks his mate in the end of July and beginning of August, at which season he is constantly decoyed in Germany by an imitation of the cry of the doe; and Dr. Tiegler's anatomical investigations proved beyond doubt that this was the true pairing season. Still the problem seemed as dark as ever, for *no* fœti were ever found until the beginning of January, and then only of very small size and undeveloped organization. In the year 1843, Professor Bischoff, an anatomist of European fame, took up the question, and spent ten years in careful study, the results of which he published in an elaborate and beautifully illustrated treatise entitled 'Entwicklungsgeschicte des Rehes' (Giessen, 1854), in which he settles the matter most conclusively, and at the same time introduces us to a new marvel of Natural History. The results of these investigations, during which he examined between a hundred and thirty and a hundred and fifty does, are briefly as follows. The rutting season is in July and August, but instead of the *ovum* or germ rapidly developing as in other species it remains dormant and of very minute size until the middle of December (four months and a half); then it suddenly quickens, and is developed with rapidity, the whole period of gestation being forty weeks. It would of course be impossible in a paper of this nature to follow Professor Bischoff through all the steps by which he demonstrates these extraordinary and exceptional facts; but his clear and patient narrative, his minute details, and, above all, his well-known character for scientific accuracy, leave no doubt as to the truth of his conclusions. I am not aware that any translation of Bischoff's book has appeared in this country, but Mr. C. Bonar has given a popular account of his discovery in an excellent little work entitled 'Forest Creatures.' One word before leaving this part of our subject. May not some similar facts, not yet elucidated, explain the mystery as to the breeding of the badger (Zool. 9217, 9277)?

The roe is generally described as strictly monogamous, but is not really so; two or more does are not unfrequently seen in the company of a buck at pairing time, and several bucks are often attracted by German sportsmen by an imitation of the doe's bleat, as already observed. Either one or two fawns see the light early in May, and are at first concealed in some dense thicket. They accompany their parents all through the summer, and if it is true that the latter drive them away in the rutting season, they certainly allow them to return afterwards, for I have seen old and young in company as late as the middle of October.

The first indications of the future horns of the roe-buck are two rounded knobs, covered with the well-known "velvet;" these are succeeded by straight simple points, three or four inches long, and in this state the young roe is termed by the German jägers "Spiess-bock" (literally, *spear-buck*). In due course these are succeeded by forked horns, having one point or antler directed forwards nearly at right angles with the "beam" or main stem; at this season the bearer is a "gabel-bock" (*i. e. fork-buck*, or forker). Another year sees the full complement of three points, the first or lower being directed forwards, the second or upper backwards: after this no further branches are added, although the horns become more heavy and massive as the amimal becomes older. But these changes are not always regularly gone through, and although six points, three on each horn, is the full natural complement, heads with seven, eight, and even ten and twelve branches are to be seen in the museums of Germany, where the collecting of deer's horns is a not uncommon mania. Many of these large and magnificent head-gears belonged to roe-deer shot in the last century. The same thing holds good of the red deer (*Cervus elaphus*), so much so that some German naturalists assert that a different variety of the stag, with larger horns ("Brandthirsch"), was then found in Europe; but the fact that many of the old roe heads are equally wonderful in their development, seems to point to the better feeding and greater age of deer of old days as the cause of their superior beauty and size of horn.

The mention of fine heads naturally leads us to the wonderful and fantastic antlers which German collectors term "abnormitäten" (*deformities*): these likewise would seem to have been more numerous in old days. When in Germany, five years ago, I made drawings of many of these heads, and, by the kindness of Mr. Newman, some of my rough sketches are here reproduced.

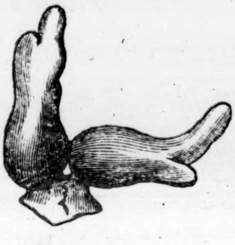

Fig. 1.

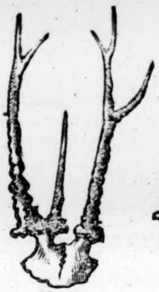

Fig. 2.

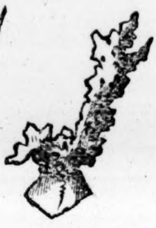

Fig 3.

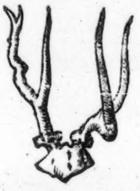

Fig. 4.

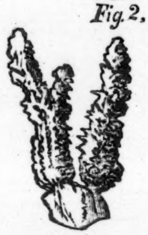

Fig. 5.

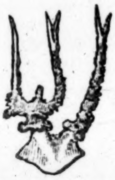

Fig. 6.

Of these figs. 1, 2, 3, 4, and 6, are all in the Zwingenberg collection already mentioned, fig. 1 having been killed at Büdingen; fig. 2 at Odenheim; fig. 3 at Urloffen; fig. 4 at Heiligenbergen; and fig. 5 at Swartzach (the last in 1814). Fig. 6 is a sketch of a very curious head, kindly lent me by my friend Dr. Dewar; it belonged to a roe-buck shot a few years ago at Black Mount, Argyleshire. These are all from genuine specimens in authentic collections, but the inexperienced must beware of the ingenious imitations which are manufactured by unprincipled dealers. Deformities of this nature are doubtless to be attributed to various causes, and they may, I think, be divided into four classes: *first*, stunted growths, produced by bad food, &c., and also found in old and decrepit bucks; *secondly*, those caused by an accident or disease of the horn itself when in course of formation; *thirdly*, the effects of injuries to the generative organs of the deer; and, *fourthly*, genuine deformities, perhaps occasioned by some constitutional defect in the animal, or possibly by "breeding in and in." A female roe-deer bearing horns was shot last year in the Black Forest, according to a correspondent in the 'Field' newspaper (quoted Zool. S. S. 435): in this case, the only instance of the kind I ever heard of, the doe was probably diseased, like the hen pheasants which assume the plumage of the male.

The ordinary food of the roe consists of various kinds of grass and herbage, including the tender shoots of trees and shrubs: among other plants the Rubus saxatilis is said to be such a favourite as to have earned in the Highlands the name of roe-buck-berry. I have already noted (Zool. 9359) an instance in which the stomachs of two examples which I examined contained quantities of Fungi of various sorts. I am not aware whether this has been observed by others or not.

Roe-deer usually spend the day in the thickest cover, coming out to feed in the morning and evening, but of course this rule has its exceptions, and where protected and undisturbed they may be found abroad at all times. But never perhaps does this most graceful deer look more lovely than when he issues from the shade of the wood, just as the setting sun is making the red pine-stems more ruddy with its glow, his mate by his side and the snow-flecked fawns following timidly behind: still he stands for a moment to reconnoitre, then, if all is quiet, leads the way slowly and gracefully to some quiet meadow or grassy glade, where the evening meal may be sought in safety; but if his quick eye, ear or nostril detects danger, away they go with a strange bounding gallop, which, along with the conspicuous white mark on the quarters, reminds one of the descriptions of the springbok of South Africa. The roe-buck's speed is not very great, but its leaps are often wonderful and very beautiful: I have repeatedly seen one take a fence much higher than itself in its stride, and that without any perceptible effort. Like most wild animals the roe seems to have its regular pathways and haunts, and may constantly be seen at the same place at a given hour. It seldom remains for any length of time in an unwooded district; but, being a wandering creature, will cross a large expanse of open country in the course of its migrations. Nor is its way easily stopped by a river, or even lake, for it is a bold and skilful swimmer, unfitted as its slender limbs and small hoofs would seem for such a purpose: it frequents several of the islands of Loch Lomond, and passes from mainland to isle of its own free will, even when unpursued. Its voice is a short harsh bleat, which has been compared to a bark. I have never heard of an authenticated instance of the wild roe turning to bay, even when wounded, but tame ones which have lost their natural fear of man are most dangerous pets, and have even been known to inflict mortal wounds with their short sharp horns.

In Scotland roe are usually shot by driving the woods which they frequent with beaters, the guns being posted in the favourite passes. They are in good condition from September or October till March or April, but the venison is not generally esteemed, being somewhat dry and lean; however, skilful cookery will work wonders with it. On the Continent the same plan is followed in the German "treib-jagd," or battue, the beaters being often assisted by the little "dachs-hund" or badger-terrier; there the bucks are also decoyed in the pairing season, as already mentioned, or they are shot with a rifle from some hiding-place near their feeding-grounds ('Field,' 13th July, 1861). In some parts of France the roe is still regularly hunted with packs of hounds, and is said to show good sport: it leaves a very powerful scent, and in the South of Scotland is frequently a source of annoyance to fox-hunters, leading the hounds from their proper game.

The roe is generally distributed throughout central Europe; it is said to be found in Italy, is common in many parts of France, and very abundant in all the forests of Germany. In Switzerland, however, it is rapidly becoming scarce; indeed F. von Tschudi says that in another century it will probably be extinct in that country ('Thierleben der Alpenwelt,' p. 153). In Scandinavia Mr. Loyd says that the roe was found in many parts of Norway and Sweden, when Pontoppidan wrote (about a hundred years ago), but that it is now almost entirely confined to the south of the latter country ('Scandinavian Adventures,' p. 237).

In our own land the roe seems to have passed through various vicissitudes. There can be no doubt that it was abundant in the great forests which covered Britain in old days, when "pasties of the roe" were served in the baron's hall, and the stout old outlaws dressed its haunches "under the greenwood tree;" but when Pennant wrote he describes it as having disappeared, not only from England, but from the Lowlands of Scotland also, the first, he says, that were to be met with (going northwards) were in the woods on the south side of Loch Rannoch, in Perthshire. It is very different now; whether Pennant was incorrect, or whether, as is more probable, the careful preservation of game and the great increase of plantations have turned the tide, I know not, but the species is now abundant in most well-wooded districts of southern Scotland and northern England. In many places they are still increasing rapidly, and are obliged to be kept down to prevent their becoming destructive to the plantations: a year or two ago forty were killed at one time, on the Earl of Home's estate at Douglas Castle, in Lanarkshire. So here we have at least one of our larger native quadrupeds which does not appear to be doomed to perish before the advance of civilization, and none could be less easily spared than the graceful and harmless roe-deer.

EDWARD R. ALSTON.

205, Bath Street, Glasgow, April, 1867.

A Reindeer Hunt. By W. D. CROTCH, Esq., M.A., Oxon et Cantab.

WE dwelt in a "bod" on the banks of Gjendins-Osen, Anders and Thor and I; but perhaps I wrong my readers in presuming their knowledge of the situation of Gjendin or the significance of an "osen" or a "bod"—*non cuivis* may still be applicable to lat. 61° 25′, long. 9° E., and Gjendin is a lake so situated, whose outlet into Skjoan River is called an "osen," and a "bod" is an abode of the genus hut, species Norsk: the elevation is over 3000 feet, the month was August, the year 1866. We had an object in view in thus selecting a habitation forty-two miles from any village, which object will be best indicated by the contents of our "bod," *viz.* a long Enfield (I wish it had been short), a double-barrelled rifle by Wilkinson, a Norsk Government breech-loader and a double-shot gun; also a setter and retriever; a butterfly-net, sweeping-net and accessories; two rods and a sketch-book; a waiting-maid, "Trondjems Aquavit," and tobacco; also coffee and other appurtenances of the inner man. Thus reindeer, willow grouse, ptarmigan, hares, &c., trout, butterflies, bugs, beetles, scenery and sketches, and even something beyond "good digestion" to "wait on appetite," when fatigue was too lazy to cook dinner, may be considered as among the attractions commanded by this our "bod" at Gjendin. The summer days had at length commenced to abandon their objectionable habit of remaining up all night, so that we were enabled to distinguish breakfast from supper, and to use the term "to-morrow" with some degree of propriety. Accurately, then, to-morrow we would go "paa ren's jagt," as Anders remarked, leaving our light-handed Phillis (her name was Rangnild) to prepare savoury messes for our possibly empty-handed return. Ren had been seen, through a glass distantly on Brurskard, so, when the evening red had shaded through gray into the yellow tints of morning, we drank the inevitable coffee and started for the high fjeld. But, oh! those abominable matutinal coffee drams, destructive alike of appetite and wind! What can that man do, be his resolution never so heroic, whose bedroom is invaded by the richest cream, the whitest sugar and the blackest coffee with quaint cakes, borne by a smiling damsel in indescribable costume? a man of passage may perhaps partake and be thankful; a sojourner, unless regardless alike of body and soul, had better bolt his door, *crede experto.* Such reflections accompanied me at least for a portion of our path by the lake of Leirungen, whereon many ducks floated up

Varge-backen and over such mosses as the world cannot show elsewhere, and a kaleidoscope can only faintly express: Iceland and ren-deer mosses in stripes of the purest yellow and most delicate French gray and spotless white lay studded by the jetty black berries of the Empetrum nigrum or "kräkling," and the purple bloom of the "blaaber" (*Myrtillus*), and were relieved by the deep green leaves of the Arctostaphylos, and enlivened by such autumnal gold and scarlet as no painter—not even Turner—dared to paint. To this wonderful carpeting succeeded a wood of silver-barked and fantastic birches and dwarf willows, out of which many a grouse bustled, loudly crowing and showing literally the white feather, though autumn was as yet so little advanced, and the numerous hares yet preserved their summer suit of gray. The mysterious lemming darted from bush to bush, and indeed I could not find that this little wanderer was ever absent from these fjelds, though their periodic migrations draw unwelcome attention to them at irregular intervals, when, urged alike by instinct and necessity, they traverse the country in the fashion of white ants, locusts or Alexander himself. At length we reached the confines of vegetation, which died out in a blaze of lichens and leprarias on the gray transitional rocks, and here we started numerous packs of ptarmigan, to which a pair of magnificent golden eagles immediately attended, though they speedily relinquished the pursuit to enforce their superiority over an audacious buzzard who infringed their manorial rights. We now passed on to the snow, and the snow of August is perpetual; the elevation was about 4200 feet, but the Guldhöpijene, and the Glittertinden sent up their conical shafts of shining snow to an altitude of more than 8000 feet. We were now on Steenflybraen, and might expect to see ren-deer at any moment. We had not long to wait, a herd of about seventy came leisurely along the slope beneath us: we dropped among the rocks unobserved, and Anders begged us not to fire as they were fully 300 yards distant, and he confidently relied on a successful stalk by a slight *détour*, but young sportsmen have itching fingers, and soon the report of the Norsk breech-loader carried by Thor drove the whole herd in wild alarm down the steep side of the mountain unharmed.

Well, I have seen my dog laugh, not heartily perhaps, but unmistakably, but I incline to believe that no animal but an ape can swear, and with respect to this pleasing art there can be no doubt of the advantage of the human species, and the Norwegian race in particular.

The promiscuous and bizarre anathemas which hailed on the offender, the rifle and the whole herd were calculated to make pious ears gape aghast, and even hardened organs quiver amazed. On sped the affrighted herd—past Kjamhullet—under Knudshultinden—on, on, while we watched the diminishing black specks over more than ten miles of snow, such is the transparency of this elevated atmosphere. As I gazed in bitter regret the voice of Anders summoned us to follow. "They have gone up Leirungsbraen," he said, "and they can never get out of that glacier:" so we started in pursuit, no *facilis decensus* was ours, and we sighed vainly for "skji" or snow-shoes, or more correctly snow-skates, which would have abridged our time and labour considerably, and but for the exciting sport the immensity of these concave snow-fjelds would have been almost overwhelming. At length we reached the glacier of Leirungsbraen, struggled over the lateral crevasses, threaded the subsequent parallel fissures, till at last, enclosed in the highest corner and huddled under an impassable wall of ice like that of the Strahek, stood the whole herd of deer; their knees and ankles (or rather their wrists and fingers) emitted a quick succession of sharp electric cracks as they stamped in mingled rage and panic, forming altogether a scene not easily forgotten. I much doubt if what followed was *sport*, though I knew it was "ren's jagt," in the full Norsk acceptation of the term—three volleys hailed on the devoted herd, after which they charged back on us in despair, and fled down the glacier and away many a league to some more secure retreat. Seven fell to our fire, but three struggled till they fell into the numerous crevasses: these we left for the present, and disposed of the others as best we could against the certain attacks of the invisible glutton, which scents slaughter from afar, like the vulture, and whose craft in eluding capture is well described by Lord Milton, in writing of the wolverine: so crafty indeed is this creature that the three dollars reward for his capture offered by the "Ting" seldom finds a claimant.

It was now late, and we had twenty miles to walk. The silver thread of the Skjoan River far below us wound in devious curves through the purple fjeld till it was lost among the blue hills of the lower country; above, the sun still shone in rosy splendour on the silent peaks: perfect stillness reigned around us, and death was at our feet. Man is not only a beast of prey, and even "ren's jagt" leaves moments of compunction. It is an unphilosophical reason, but I think the game is too large, and in this case at least too defenceless. Be this as it may, we were weary and late before we re-entered our "bod" at Gjendin's Osen.

W. D. CROTCH.

Kloyne, Vaage, Nordre Gudbrands Lalen,
Norway, March 26, 1867.

Labrador Badger in Kent: Abundance of Badgers in Kent.—An American badger (*Meles labradonica*) was caught by a small trap in a wood belonging to Mr. Bell, of Bourne Park, near Canterbury: it had evidently made its escape from confinement, but where the animal could have come from is a mystery, as there has been no exhibition of wild animals in this district for some considerable time. The general colour is a mixture of light brown; under the hair it has a fine silky fur, from three to four inches in length; chin, throat and breast of a pearly white; the face markings in a line with the ears are of a very faint light brown; the claws of fore feet horn-colour, and considerably longer than those of the common badger. The keeper's son, who caught the animal, unfortunately destroyed it, from not knowing its rarity; otherwise it was slightly injured by the trap, it having only two of its toes caught, and the force of the trap was not sufficient to break the bones. The biting force of this badger on the trap was such as to break the two upper canine teeth short off. The skull, with other portions of its bones, will shortly be submitted to Professor Owen for his inspection. There have been more specimens of the common badger captured and killed in Kent within the last two or three years than for many years previously; two were caught a short time ago in a wood near Knowlton Court; they were discovered by the East Kent foxhounds in drawing the cover: the earth was supposed to contain a fox, and the diggers were surprised to find their fox turn out to be a very fine badger, which was taken alive: it was placed in supposed security, but on the following morning the badger was gone, having made its escape during the night. The owner returned to the badger's earth to see if it had gone home; he was not long kept in doubt, for his dogs soon told him the badger had returned, and was not far in: digging was again commenced, and in a short time it was unearthed, with an additional one (the male) which had been overlooked on the previous digging. The female soon after its capture gave birth to three young ones, which lived but a short time. These two badgers are now alive and in the possession of Mr. Ayres, of Nonington, in Kent.—*Charles Gordon; Dover Museum, March* 23, 1867.

Correction of an Error: the Gray Seal.—Agreeably to the request of your correspondent Mr. Alston, whom I have to thank for the suggestion, the seal lately captured at Seaview, near Ryde, has been inspected, and I regret to say I was misinformed, as it proves to be the gray, and not the Greenland seal, as stated in my note (Zool. S. S. 700); but we cannot see everything, and must occasionally trust to others: however, I did go to Ryde, to make inquiry, but the seal had been sent on to Newport. I beg to inform Mr. Newman that not only a drawing of the teeth, but an outline sketch of the skulls of the gray, Greenland and common seal were sent, but the mistake arose from the small anterior and posterior prominences of the inner molars being taken for regular lobes. Not only are the canine-like molars characteristic, but so is the elongated flattened head, obtuse muzzle, diagonally sloped from upper lip to nostrils, and small eyes set far back and high in the head. Few of the measurements are given, for the seal being stuffed they are not to be depended on.

Length, inclusive of tail (which is 4½ inches)	4	ft.	4½	inches.
Round the lower part of the neck	1	„	7	„
Circumference of body below the shoulders	2	„	9	„
„ of posterior part	1	„	8	„
From upper lip to nostril	0	„	2	„
Fore leg and foot	0	„	6½	„
Claw or nail of first toe, longest	0	„	1¾	„
Hind leg	0	„	9¾	„
Claw of first toe, longest	0	„	1	„
Bristles, longest	0	„	3½	„

Teeth, upper jaw:	incisors	6	Lower jaw	4
„	molars	10	„	10
„	canines	2	„	2
	Total	18		16

The jaw is about 3½ inches deep: the incisors small, excepting the exterior ones of the upper jaw, which are elongated. The bristles are of a light brown colour, and somewhat flattened. Ground colour grayish white, with a decided yellowish tinge: the upper parts more or less marked with dark and light brown spots, varying greatly both in size and shape: they are darkest on the anterior part of the back, but most numerous towards the shoulders, where they become almost blended. The lower part of back and sides more sparsely and indistinctly marked, becoming almost obliterated towards the belly, which is of a dull yellowish white. The head has a brownish central line, expanding at the crown, or rather nape, for the head is flattened, and has, as well as the back, a strong bluish tinge. There is a semicircular patch of dusky brown spots round the shoulders. Head long; body tapering or cone-shaped; forehead obtuse; legs very short, and mole-like; feet of great size and width; the grinders are from one-tenth to three-twentieths of an inch apart. The canine-like molars of this young seal, being so highly developed, leads me to believe that its powers of tearing and masticating must be very great, and it therefore preys on the larger fish. The head being so flattened and elongated, it must be inferior to the common and the Greenland seal in intelligence.—*Henry Hadfield; Ventnor, Isle of Wight, May* 15, 1867.

[I am much obliged for this explanation; I think there is no doubt about the former name being an error, and I think also that it is most desirable that all such errors should be rectified as speedily as possible.—*Edward Newman.*]

Vari-coloured Eyes in the Dog and the Horse.—I saw a very curious circumstance in an old "collie" dog, or rather a mongrel shepherd's dog, the other day. I was crossing Windsor Bridge, when I saw the dog walking towards me, and I was surprised to see it had one eye deep brown, and one very light blue. I went up to its owner and questioned him concerning the dog. The man told me the dog was born with one eye blue and one deep brown, and never was in the least blind. His mother was a greyhound and his father a mongrel, I think, and their eyes were of the usual colour. But his grandmother was (as the man said) "chany-eyed," that is, one eye blue and one brown. Might not this peculiarity have passed over one generation in much the same way as lunacy or the gout in families? The dog was a very good house dog. The same farmer told me that he once had a horse who was "chany-eyed," not blind in any way, but who was born with a brown and a blue eye. This is also a curious fact; is it usual? I have heard of one other instance.—*Alexander Clark Kennedy; Eton.*

A Mouse's Store.—Mr. J. Dickens, of the Saracen's Head, near Holbeach, has just discovered a mouse's nest in his garden in which a winter's store of 1329 filbert nuts had been secreted by the industrious little animal. They measured half a peck, and weighed six pounds.

Double Bird's Nest.—Between the upright stems of an oak and two thorns, at the bottom of my garden, a pair of wrens built: whilst they were sitting a pair of flycatchers selected the top of the wren's nest for the foundation of their own, which they completed and occupied before the young wrens had flown, neither pair, so far as I could ascertain, interfering in the least with the other. The wrens have again built in the same situation, so I hope the flycatchers may return to their old home, though I fear the wrens will have left before the others commence operations.—*Herbert Greenwood; Sandford Lodge, Hampstead, May* 13, 1867.

What gives a Bird a claim to be classed as British?—If your correspondent "B. T. S." had looked over the lists of European birds, in the fourth volume of my work on the 'Birds of Europe,' with care, he would have observed two things: *first*, my two lists treat of birds occurring in Europe, *not* Britain; *secondly*, in my second list I have always referred to the country in Europe in which the bird has been accidentally observed. This is the case of the brown snipe alluded to by "B. T. S." I find it entered in my second list thus, "51. Scolopax grisea, *Gm.* N. A. England. Brown snipe, *Yar.* 3. Mor. 4." With regard to Sabine's snipe, I have given it in List 1, No. 367, as a *var.* of the common snipe. Steller's western duck was admitted into my List No. 1 because it has occurred in Sweden, Denmark and Germany, as well as England, and if, as Gmelin asserted, it breeds in Kamchatka, it is most probably a more frequent visitor to northern Europe than at present recorded. The buffelheaded duck is placed in List 2, No. 70, and England, its only (I believe) European locality, has been given. The American whitewinged crossbill (*Loxia leucoptera*) has occurred in England accidentally: I have a specimen shot in Suffolk. Gould, in his beautiful work 'Birds of Great Britain,' also figures and describes the Loxia bifasciata of Nilsson = Crucirostra tænioptera of Gloger, as a distinct whitewinged crossbill, and this is the point I presume in which the Editor of the 'Ibis,' like many other naturalists, differs from Mr. Gould. Bartram's sandpiper (*Totanus Bartramia*, Tem.) is No. 48 of my List No. 2, and England and Germany given as localities where it has been observed. With regard to the general question, "What constitutes a British bird?" the only answer which I think can be given is, that systematic writers on British birds have hitherto introduced all birds whose appearance in Great Britain has been authentically recorded once. I think this is a great mistake, and ought to be opposed by all scientific ornithologists. In all humility I ventured to separate these birds in my European lists, considering those which either bred or were frequent visitors in Europe as belonging to its Fauna, while those which appeared accidentally I placed in a different list. I have arranged my egg-cabinet on this plan. Professor Newton, the Editor of the 'Ibis,' has been for years urging us to discard all American and other wanderers from our lists, and I think that the Editor of the 'Zoologist' has maintained the same views.—*C. R. Bree; Colchester, May* 2, 1867.

[I have to apologize to my readers for allowing the communication from "B. T. S." to appear without authentication. It did not come to this office, as so repeatedly requested, but was left at Mr. Van Voorst's, and reached my hands only just in time for arrangement with other short communications. I quite supposed that some other communication had accompanied it, but do not find any, and I have no knowledge whatever of the writer. The subject is unquestionably a suitable one for discussion, supposing it to have been properly introduced, and supposing also that anything can be said to elucidate the question. My own opinion of the practice of introducing stragglers has been expressed in the 'Dictionary of British Birds.' I scarcely suppose any reader is without that book, but in case there is such an one I will repeat it here, "Notwithstanding the pains I have taken to collect and incorporate these various records (of the occurrence of stragglers) I am bound in fairness to state that I regard a great number of the species now added, as well as of those described by Montagu, as *not having the slightest claim to the title of British birds.* I confess this seems something like building a house of cards and blowing it down again. My duty, however, seems to me very plain. Like my great predecessor I have collected and arranged these records, and like him I express my opinion that *in a scientific point of view they are utterly worthless. The time seems to have arrived when the conscientious compiler must eliminate all such interlopers.*" To this opinion I still adhere.—*Edward Newman*].

Nesting of the Peregrine in Stirlingshire.—In the 'Zoologist' for April (S. S. 702) you published a few remarks of mine in reference to the nesting of the peregrine falcon in inland situations in Scotland. I now send you the result of my observations of this spring on the same subject. I wrote to a friend in Stirling, in the beginning of April, to inquire whether the falcons had made their appearance this spring in the hilly districts that lie to the south of the villages of Hippen and Gurgunnock, in Stirlingshire, a locality at least thirty miles in any direction from the sea. In a few days I received a reply, to the effect that he had seen a pair of peregrine falcons sailing around a precipitous mountain-side, from which, in 1857, I had taken a nest. Begging him to watch carefully for the nesting-places, and to get ready a sufficient amount of rope, I waited till the 26th of April, and then went to Stirling. The morning of the 27th saw us at early dawn at the base of the precipice, and I immediately—directed by his barking note—descried the tiercel sailing high overhead: my companion pointed out a spot where he thought he had marked the nest, but, after a severe climb, there was no hole or trace of a nest to be found. Rather disappointed, but still hoping that the female was sitting close somewhere in the rock, I walked along the base of the crag, shouting out, and every now and then striking some rock with my stick: suddenly from behind me the female bird started forth from the rock with a wild cry, and began circling round our heads, apparently in great anger. Not having discovered the exact situation of the nest, we withdrew about a quarter of a mile, and hid ourselves behind a boulder rock, watching every movement of the falcons through a glass: as soon as we were out of sight the female began wheeling around that portion of the cliff where evidently the nest was. The tiercel came down and joined her, both sailing backwards and forwards across the face of the cliff, with a flight not unlike that of swifts. In a quarter of an hour or so the female bird alighted on a small projection of the rock, stretched her pinions to their full extent, then gracefully closed them and commenced preening her wing-feathers: her toilet being arranged she turned round and popped into a small hole behind her in a most undignified manner, bobbing her head and waddling in after the manner of a pigeon entering a dovecote. I felt confident this must be the nest, but walking back again to the base of the rock, struck with my stick, and out she flew, screaming wildly and hovering about thirty feet over my head: the tiercel again joined her, and both of them displayed great indignation at my intrusion, circling round my head and uttering sharp cries, the tiercel, however, always keeping at a far greater distance than the female, which I could have shot with the greatest ease. To get at the nest was a matter of some difficulty: the precipice, a straight up and down slippery trap rock, was at least a hundred and fifty feet high, and the nest about fifty feet from the bottom: our best plan was to let a rope over until it touched the ground, and then with its aid climb up to the nest, but to accomplish this required more rope than we had with us, so we returned to Stirling. Sunday intervened, but the 29th of April saw us out again with an extra hundred feet of rope: letting the rope over, attaching it to a post at the top, constructing a rough ladder to ascend by, took us some hours, and it was six in the evening when my companion got up and took four eggs out of the hole: the eggs were lying on the bare rock, not a bit of material of any kind underneath them: during the time my companion was ascending the rope the female bird made most vicious attempts to strike him, sometimes coming within five or six feet of his head. I must mention what occurred when my companion was within ten feet of the nest: a pair of wild ducks, going to their lowland feeding-ground, came down the glen; the tiercel, as they passed the cliff, dashed off in pursuit, singling out the mallard, who with loud quackings attempted to rise above the hawk; the sight seemed too much for the female falcon; for a few moments she forgot her maternal instincts and joined her partner in the chase; making one dash at the mallard, which he eluded, she returned again to hover over our heads: a thick fog rolling up the glen shut out the tiercel from my view, and I could not see whether he killed his quarry or not, but I expect he did, as the ground at the base of the precipice was strewn here and there with grouse and duck bones and feathers. After withdrawing the rope, the falcon re-entered the hole, and as long as we were there did not leave it, and as it was getting dark I fancy she would remain seated in the nesting-hole till next morning. The eggs were deeply sat on, and gave me some trouble in emptying. These falcons will doubtless raise a second brood, unless some keeper gets his eye on them. I was so interested in their magnificent flight, courage and beauty of plumage and shape, that, easily as I could have done it, I refrained from doing so, hoping that they will hatch their second clutch of eggs and rear their brood in safety. —*H. W. Feilden; Fleetwood School of Musketry, May* 6, 1867.

Erratum.—Zool. S. S. 702, 18th and 19th lines, for "In Aloa Craig, just above the village of Aloa," read "In Alva Craig, just above the village of Alva."—*H. W. F.*

Peregrine Falcon breeding at Beachy Head.—A pair breed every year in a hole in the cliff, but unfortunately the young are always taken, as they were last year.—*John Dutton;* 51 *Terminus Road, Eastbourne, April* 20, 1867.

Little Owl near Cambridge.—A very fine little owl (*Noctua passerina*) has been shot near here lately. I saw two gadwalls to-day, shot the day before yesterday.—*William Farren;* 10, *Rose Crescent, Cambridge, March* 22, 1867.

Habits of the Rock Pipit.—In Mr. Stevenson's 'Birds of Norfolk,' vol. i. p. 169, there is an article upon this bird as an "occasional visitor" to that county. Mr. Stevenson says that the rock pipit does not breed in Norfolk, and he mentions two specimens which he shot on the 7th of March, 1864, near Norwich, on the river-bank, as birds "that were passing over in their migratory course, and had paused a little while to rest and breed." I think if Mr. Stevenson will examine the question a little more closely he will find that the bird is a constant winter resident on the banks of the fine Norwich river, and that it merely migrates down to the coast to breed in summer. I do not suggest this from any actual knowledge of the subject as applied to the bird in Norfolk; but I infer it from what I know of the bird's habits in Essex. When I first came to Colchester, in 1859, Dr. Maclean, who is a well-known naturalist, put me in possession of the whole "little history," which is very interesting. All through the winter the banks of the Colne between Colchester and the sea are occupied by the rock pipit, and Dr. Maclean especially pointed out to me that whenever they were flushed they invariably alighted on the muddy portions of the shore—never on the grass. One of them was shot and stuffed by Dr. Maclean, so that there could be no mistake about the species, with which, in fact, he had been many years acquainted. In the spring all the birds leave the shores of the river, and will be found breeding among the grassy cliffs of the coast, returning to the banks of the river again in the autumn. Mr. Stevenson will at once see the source from whence come the birds found on the banks of the Orwell, as stated by Mr. Dix. They come from the Felixstow or Walton cliffs, where they breed every year. It is a fair inference, I think, that the birds shot by Mr. Stevenson on the Norwich river in March were going down to the coast to breed, and that he will find the same habits obtain in Norfolk which I can speak from my own knowledge do in Essex.—*C. R. Bree; Colchester, May* 16, 1867.

Water Pipit at Brighton.—When at Brighton, during Easter week, I saw several specimens of this bird in the possession of Mr. Swaysland, the naturalist, of Queen's Road: on inquiry I found he had obtained them near Brighton between the 16th and 20th of March last: there were ten specimens in all. As this is, I believe, but the second authentic record of the appearance of this species in this country, it is worth noticing.—*Frederick Bond;* 21, *Adelaide Road, May* 2, 1867.

Wood Lark at Brighton.—I was very much surprised at the number of wood larks I saw in Brighton: I was told that they had occurred in large flocks, as many as two thousand birds being seen in one day. I have myself never seen more than about two dozen in a flock, more often from five to ten birds, so I thought you would like to know of the occurrence of this species in such large numbers.—*Id.*

[From all correspondents in Sussex and Kent I hear of the extraordinary number of wood larks that have been observed during the past spring: it would be most interesting to learn more particulars as to the direction of their flight, condition, &c. Do these birds usually form part of the great vernal immigration? I have no recollection of having seen at any time more than three or four together, and more commonly one only, high up in the heavens, and pouring forth his delicious notes on the wing, in the manner of the sky lark.—*Edward Newman.*]

Snow Bunting at Eastbourne.—A splendid pair was shot at the "Wish Tower" on Sunday, April 14th, one of them being in the full summer plumage, that is, pure white head and breast, and black back. I have never seen one here in the summer plumage before.—*John Dutton.*

Hawfinches Nesting in Kent.—Hawfinches have been unusually numerous here this spring. I saw three on the 13th of April, the first I had ever seen, and became acquainted with their note, "tzit" or "tzit-it," the knowledge of which was of great use to me afterwards in detecting them among the tall leafy hornbeams. On April 25th I found a nest begun in a whitethorn, built of sticks, with lichen conspicuously interspersed in it. This I found, from that often-quoted and very accurate description in Latham's 'Synopsis' to be that of a hawfinch; and I soon found another nest in a tall whitethorn, by means of the old birds, who kept up a continual agitation round me. I now actively pursued the search, and found between that time and May 8th eight other nests with eggs, and five which I considered to be new nests, they being either difficult of access or unfinished when I went away. Of this large number all were built in thorn-trees save the following,—three in elder-bushes, about five or six feet from the ground, one in the hanging branches of a slender holly tree (this one quite close to the house), one on the horizontal bough of a hornbeam, one in a yew tree. By following up their note I found a flock of about twelve among some tall hornbeams. Some of these would probably have built nests subsequent to my departure. To find ten undoubted hawfinch's nests is, I believe, a rare occurrence for a young ornithologist, especially considering that I had never seen a hawfinch, for certain, previous to the four weeks in which I found the nests.—*Clifton; Cobham, Kent.*

Crossbill at Ripon.—On Saturday, the 27th of April, I shot a crossbill flying with great speed, together with eleven others: it was flying low. Its plumage was good and the feathers on the back very bright. I have never seen crossbills here before.—*Goderich; Studley Royal, Ripon, April* 29, 1867.

The Hoopoe near Helston, Cornwall.—The Lizard district has given us a specimen of the hoopoe this spring in the parish of Sithney.—*E. H. Rodd; Penzance, April* 24, 1867.

Kittiwake at Eastbourne.—Strange to say four or five have been procured lately, in the full summer plumage, with the pure white head, &c. It seems singular, as I never knew them got in that plumage here before, nor is there any breeding station here that I know of.—*John Dutton.*

The Silvery Hair-tail in Mount's Bay.—On the night of Tuesday, the 9th of April, there was captured in the net of one of the Mount's Bay mackerel-boats a specimen of the silvery hair-tail (*Trichiurus lepturus*). It was placed in my hands in a perfect state, and very shortly after its capture. As it is, so far as I know, the second specimen which has been British caught in a perfect condition, I subjoin a few particulars. Length over all two feet nine inches. Its depth at a half inch in advance of the origin of the pectoral was two inches and one-eighth, and it attained the same depth precisely immediately behind the vent, between which two points its depth all along was within one-eighth of an inch of the same measurement. The vent was twelve inches and a half from the extreme tip of the lower jaw. The greatest breadth of the fish was across the eyes, where it was one inch. The body reached its greatest depth at nine inches from the tip of the lower jaw, where it was six-eighths of an inch through. The dorsal fin contained one hundred and thirty-five rays, all soft: it commenced on the top of the head, one inch behind the orbit of the eye and midway between the eye and the origin of the pectoral: it reached its greatest length of fin-ray just over the vent, where the longest ray was one inch and a half long: the fin ended a considerable distance from the tail. The pectoral was small, and consisted of eleven rays, all soft; its greatest length was one inch and a half. There was no tail-fin at all: the tail consisted of a long tapering bundle of caudal-rays closely attached and ending in a point. There was neither ventral nor anal fin, but from the vent backwards there extended along the ridge of the belly to a little aft of the termination of the dorsal a single row of very small spines, equidistant at about a quarter of an inch, the forward ones inclining backward. Forward of the vent the ridge of the belly was smooth. Looking at the character of the fish the head was powerfully built. From the eyes forward there inclined a stout plane, which changed sharply to an acute angle as it approached the tip of the upper jaw. At the extremity of the upper jaw there were (two on each side, placed irregularly) four very long barbed teeth; behind these there was in each side of the upper jaw a single row of small sharp teeth, of which three or four in each side towards the middle were larger than the others and barbed. The teeth in the lower jaw corresponded, except that in place of the long ones in front the lower jaw itself protruded beyond the upper, and contained at its extremity two large barbed teeth, extending upwards and backwards and finding no place within the upper jaw when the mouth was closed. When the mouth was shut the middle teeth on either side were interlocked, but the jaws there did not close home. Close behind these middle teeth there was a very peculiar scissors-like arrangement of the jaws, which enabled them to open to a much greater extent than looked probable (something after the fashion of the night-hawk's jaws). Indeed the gape of the mouth from tip to tip of the two jaws was easily two inches, but afterwards, when the fish got stiff the jaws would only open as far back as their apparent origin. I mention this because I see one prior observer lays stress on the point that the gape is small. There were no teeth in the vomer, but there was a rough process in the throat. The tongue was semidetached. The eye was situate high in the head. The forward edge of its orbit was one inch and six-eighths from extreme tip of lower jaw its diameter was six-eighths of an inch. Irides silvery white. The sides of the head were hard and smooth. The preoperculum circular and semidetached, the operculum long and acutely oval, ending in a soft membrane which overlapped the origin of the pectoral. The gill-rays were so arranged as to give an unusually large surface of gill extending far up under the head and jaw. The nostrils were very large, and lay close up to the top of the head, just before the eyes. The lateral line starts from the point at which the operculum closes on to the top of the head, exactly under the base of the first dorsal fin-ray, and deflects with a slight curve in its incline, until at four inches, measuring straight from its origin, it gets in line with the lower orbit of the eye; thence it runs straight to the tail, parallel, until within a few inches of it, with the ridge of the belly. The top of the head, besides of the upper jaw and the outer part of the lower jaw, were metallic-blue. The dorsal fin was semitransparent and almost colourless, but what colour it had was yellowish brown, the fin-rays being dark. The rest of the fish was silvery, which colour was apparently caused by a thin and delicate membrane which rubbed off easily and left a dull flesh-white behind it. The specimen has been preserved for our Museum.—*Thomas Cornish; April* 13, 1867.

Parasitical Worms in the Stomachs of the Common Guillemot and Cormorant.—On the 18th of March a specimen of the common guillemot passed into my hands for preservation; it had been killed a day or two previously at Salthouse. In dissecting its stomach (as I almost invariably do with all specimens that pass through my hands) I found it empty, with the exception of a live worm that measured one and a half inch in length; in the gullet just above the entrance to the stomach I found four others, two of the same size, and the others smaller: these were apparently working their way to the stomach. On the 27th of the same month I also received for preservation an adult female cormorant, shot in the neighbourhood of Yarmouth: from the stomach of this bird I obtained as many as eighteen of these worms, which were of the same description as those I found in a former specimen of this species. These varied from three-quarters of an inch to two inches long; the majority of them were firmly fixed in a cluster to the inner membrane, the others were located close to the entrance, and, like those in the guillemot, were quite detached: in close proximity to the space occupied by the cluster just mentioned I noticed a number of small lumps, somewhat resembling tumours, with a small orifice in the centre of each; these were arranged in a similar manner to the worms. Am I right in supposing these are caused by the suctional power of these parasites, who, having derived all the nutriment to be obtained from that spot, seek a fresh site to renew their operations? I noticed the small holes only in the surface of the membrane from whence I had pulled them out, which perhaps they had occupied but a short time. I have preserved these worms in spirits. I also took from the cormorant an example of the sharp-nosed eel, measuring fifteen and a half inches in length—rather an unusual morsel: the head of the eel lodged in the bird's stomach, and therefore was partly decomposed; its body reached along the gullet, so that the tail came within two or three inches of its captor's mouth: the tails of two smaller eels, with the bones of the remaining portions, also occupied the stomach.—*T. E. Gunn.*

A Flight of Locusts.—At Malta about noon on Saturday, the 9th inst., the sky became filled with locusts, which appeared to be travelling from east to west over the island. The main body preserved a high altitude, but many, perhaps tired by their long flight, settled in different localities along their route. A light breeze was blowing from the westward, so that the insects were proceeding head to wind. The town was quite in a state of excitement. The boys were catching the locusts in their hats, and the sparrows and jackdaws were feasting on them in the air with evident satisfaction. This extraordinary spectacle lasted all the afternoon. During the whole of this time they never ceased passing for a moment, and towards sunset their numbers were considerably augmented. In some parts of the country the fields and gardens were covered with them. Most fortunately, for some unaccountable reason, they made no long stay, and on the following morning, with the exception of a few stragglers, had all disappeared. Nor do we hear of any serious damage having been done by them to the crops, which have already suffered much from the continued absence of rain. A similar visitation occurred at Malta in 1814, the year after the plague; and in 1850 a cloud of these insects appeared on the eastern side of the island and did some injury.—*Malta Times.*

PROCEEDINGS OF SOCIETIES.

ENTOMOLOGICAL SOCIETY.

April 1, 1867.—Sir JOHN LUBBOCK, Bart., President, in the chair.

Donations to the Library.

The following donations were announced, and thanks voted to the donors:—'Exotic Butterflies,' Part 62; and 'Illustrations of Diurnal Lepidoptera,' Part 3, Lycænidæ, by W. C. Hewitson; presented by the Author. 'On the Data afforded by the Burchellian Collection as to the Geographical and Modificational Ranges of certain Brazilian Insects,' by J. O. Westwood; by the Author. 'The Zoologist' for April; by the Editor. 'The Entomologist's Monthly Magazine' for April; by the Editors.

Exhibitions, &c.

Mr. S. Stevens, on behalf of Mr. Higgins, exhibited six specimens of Damaster blaptoides from Japan: the species appeared to be very local, and to be found only near Nagasaki, whilst its smaller congener D. Fortunei was found in the North of Japan.

Mr. Pascoe exhibited, and read the following description of, a new species of Toxotus from Greece:—

TOXOTUS LACORDAIRII.

"T. (♂) fuligineus, pube griseo-argentea tectus; segmentis duobus ultimis abdominis, femoribusque apicibus exceptis luteis; tibiis anticis et intermediis dimidio basali lutescentibus; antennis basi luteis, articulo tertio quinto longiore. (♀) mare vix robustior; in toto nigrescens, sparse argenteo-pubescens; tibiis intermediis et posticis articulis basalibus dilatatis; antennarum articulo quinto tertio duplo longiore.

Long. 8 lin.

"The male somewhat resembles T. Quercus, but in the comparative length of the joints of the antennæ it is more like T. meridianus. The female is scarcely stouter than the male, and differs from it, as well as from all other European species of the genus, in having the third and fourth joints of the antennæ equal, and the two together not longer than the fifth; as well as in having the basal joints of the four posterior tarsi as broad as the succeeding joints: the same is also the case with the anterior tarsi, but the character occurs in other species. In both sexes the two tubercles on the prothorax are strongly marked and have a slightly linear form.

"I have not dwelt on colour, as that will probably be found to vary. The pair from which the above descriptions were made have been for some years in my cabinet, and were originally obtained at Mr. Stevens's, from a collection made in Greece."

Mr. Edward Sheppard read the following extract from the 'Daily News' of the 29th of March, 1867:—

"According to the Melbourne papers just received, enormous swarms of beetles have been noticed lately in Victoria, Australia. In the early part of January a swarm was noticed near Ararat, in Victoria, flying in a column about twenty yards broad, and keeping in compact order. They cast a dark shadow on the ground, and they were an hour in passing the spot from which they were seen. At a certain point they turned off at right angles. The Eucalypti in the neighbourhood of these insects have been stripped of every particle of foliage. Great numbers of the beetles fall to the ground during the flight. The noise they make while flying is like that of a hurricane playing in the rigging of a ship. The colour of these beetles is a dark bronze."

Mr. Bates said that Anoplognathus was found amongst Eucalypti, but he thought the insect referred to was more probably a grasshopper than a beetle: it was not probable that Coleoptera would thus migrate in swarms.

Mr. Weir and Mr. Wallace referred to the clouds of Coccinellæ which were commonly observed in the hop-growing districts of Kent.

Mr. M'Lachlan mentioned that Dr. Brauer had recently described, under the name of Pharyngobolus Africanus, the earlier stages of a species of Œstridæ, the larva of which had been detected in the throat of the African elephant.

Mr. F. Smith exhibited an ichneumon, Rhyssa persuasoria, placed in his hands by Mr. Bond, which appeared to have worked its long ovipositor, bradawl-fashion, through a piece of fir-wood, in quest of the larva of Sirex juvencus, on which it is parasitic; part of the ovipositor had been left in the wood. Mr. Bond had some years ago found at Bournemouth two ichneumons with their ovipositors so firmly fixed into wood that he was unable to remove them. Mr. Smith had always hitherto supposed that the Rhyssa inserted its ovipositor into the holes made by the Sirex, instead of making a hole for itself in the tree: if the latter were the rule, how did the ichneumon detect the presence of the larva within the wood, and know where to insert its ovipositor? Mr. Edward Doubleday, however, had told him that he had seen twenty or thirty specimens of the female of a Pelecinus which had perished with their elongated abdomens inserted into the stem of a tree, whence they had been powerless to extract them; the male had a clavate abdomen, but that sex had never been met with by Mr. Doubleday.

Mr. Bates inquired whether an ovipositor was not, homologically, a modification of one of the abdominal segments.

Mr. Smith thought it was rather a modification of the aculeus.

Mr. Wallace suggested the converse, namely, that the sting was a modified ovipositor, and that its use as a weapon of defence was a secondary and acquired use.

Mr. G. S. Saunders exhibited a number of Poduridæ, found near Stokesley, in pools or puddles consequent upon the melting of the snow, which had recently lain on the ground in the North of Yorkshire for two or three weeks.

The President believed them to be Podura (Anura) tuberculata of Templeton, though their shrivelled state rendered them difficult to identify with certainty.

Mr. Wallace mentioned that he had received a letter from Mr. Jackson Gilbanks, of Whitefield Castle, Wigton, on the subject of the distastefulness to birds of brightly coloured larvæ; the writer had frequently observed the dislike, or rather the "abhorrence and dread," of pheasants, partridges, young wild ducks and tomtits for the "gooseberry caterpillar:" it did not, however, clearly appear whether the writer referred to the larva of Abraxas or the grub of Nematus.

Paper read.

Professor Westwood communicated a paper entitled "A Decade of New Species of Mantispidæ in the Oxford Museum."

May 6, 1867.—Professor WESTWOOD, Vice-President, in the chair.

Donations to the Library.

The following donations were announced, and thanks voted to the donors:—'Proceedings of the Royal Society,' No. 89; presented by the Society. 'Proceedings of the Holmesdale Natural History Club for the year 1865 66;' by the Club. 'List of Coleoptera collected in the Mountains of Lycoming County,' 'List of Coleoptera collected near Fort Whipple, Arizona, by Dr. Elliott Coues, in 1864-65,' 'Additions to the Coleopterous Fauna of the United States, No. 1,' and 'Revision of the Dasytini of the United States;' by the Author, Dr. J. L. Leconte. 'Muscardine,' and 'Revue de Sériciculture Comparée,' for 1863-64-65-66 (Nos. 1—9); by M. Guérin-Méneville. 'Essai d'une Faune Monographique de l'Archipel Indo-Néerlandais, I. Monographie des Scutellérides, II. Monographie des Péirides;' by the Author, M. S. C. Snellen van Vollenhoven. 'Natural History of the Tineina,' vol. ix.; and 'The Tineina of Syria and Asia Minor;' by the Author, H. T. Stainton, Esq. 'A Monograph of the British Psocidæ;' by the Author, R. McLachlan, Esq. 'Stettiner Entomologische Zeitung,' 1867, Nos. 4—6; by the Entomological Society of Stettin. 'The Zoologist' for May; by the Editor. 'The Entomologist's Monthly Magazine,' for May; by the Editors. W. S. Macleay, 'Illustrations of the Annulosa of South Africa;' Chenu, 'Encyclopédie d'Histoire Naturelle,' Coléopterès, vol. i.; Blanchard, Castelnau and Brullé, 'Histoire Naturelle des Insectes;' Hentschius, 'Epitome Entomologiæ Systematicæ secundum Fabricium;' 'Prodromus Lepidopterorum Britannicorum,' by a Fellow of the Linnean Society; Schmiedleins, 'Einleitung in die nähere Kenntnis der Insectenlehre;' Panzer, 'Deutschlands Insectenfaune oder Entomologisches Taschenbuch für 1795;' Nees von Esenbeck, 'Hymenopterorum Ichneumonibus affinium Monographiæ;' Fuessly, 'Archives of Entomology;' Humphreys, 'The Genera and Species of British Butterflies;' presented by J. W. Dunning.

Election of Members.

J. Sidebotham, Esq., of 19, George Street, Manchester, was elected a member. M. S. C. Snellen van Vollenhoven, of Leyden, was elected a corresponding member.

Exhibitions, &c.

Mr. S. Stevens exhibited a number of Australian Coleoptera, chiefly Carabidæ, selected from a collection sent by M. Damel, from the district of Cape York.

Professor Westwood had recently received from a correspondent in New South Wales six or eight Cimicidæ of the family Reduviidæ (probably Enicocephalus tasmanicus, *Westw.*, Tr. Ent. Soc. ii. 24), which were described as flying, or rather dancing, in the air like midges, and which possessed a pleasant musk-like scent, which communicated itself to the letter in which they were enclosed.

Mr. Stainton exhibited cases of Coleophora lixella, the larva of which, when young, was found to feed on Thymus serpyllum, but afterwards transferred itself to a species of grass: cases were shown which were found on grass, but composed of portions of the leaf or calyx of thyme.

Mr. Stainton had intended to have also exhibited the larva of Hyponomeuta egregiella, but the specimen had, during the afternoon, begun to spin up in the box, and was invisible: the larva had been previously found by M. Millière, at Cannes, on

Erica scoparia, and a month ago Mr. Stainton detected it at Fontainebleau, on Erica cinerea.

The Secretary read a letter from Mr. R. W. Fereday, Corresponding Member, of Christchurch, Canterbury, New Zealand, dated 4th of February, 1867, of which the following is an extract:—

"I have much satisfaction in communicating to the Society the capture of a specimen of Cynthia Cardui, in the province of Canterbury, on the 5th January last. The plains of Canterbury are separated from the west coast of the island by a range of mountains; one of these is named Mount Torlesse, and is about 6000 feet above the level of the sea: immediately adjoining are some lower hills, and it was at the summit of one of these, about 3000 feet above the sea, that I met with this butterfly, and made the capture. It was flying about and settling on a piece of rock, the herbage up to the top of the hill being tolerably luxuriant amongst the stones. It is the only specimen I have seen, and have not heard of any one else having seen one in this colony. It is so precisely like my English specimens in size, colour and markings, with one exception, that I entertain no doubt of the identity of the species. I attribute the exception to a local variation; it is with respect to the round spots on the hind wings, which in my British specimens have no distinct centres, whilst in this specimen ocelli take the place of mere spots; it is, as it were, a spot of bright light blue, the same colour as the small blue marks at the anal angle of the hind wings, introduced into the centres of the normal spots of the English specimens. I enclose a photograph of it. I do not recollect whether any of the British examples have the blue centres to the spots. If the insect is Cynthia Cardui, of which I do not entertain a doubt, this capture is important, as it will add the link which will complete the circuit of the globe in the range of this species."

Mr. Bates observed that all the Australian specimens of Pyrameis Cardui have ocellate spots on the hind wings, like Mr. Fereday's New Zealand example; it was a local modification, which, being constant, went to show that there had not been any recent immigration of the species into Australia or New Zealand. With regard to the supposed universal distribution of P. Cardui, Mr. Bates thought this was an error: the typical form of the species, no doubt, occurred in Europe and North America, in Asia and Java, and in South Africa, and the above-mentioned race occurred in Australia and, as now appeared, in New Zealand; but the South American specimens which were reputed to be P. Cardui were, in fact, a rosy variety of P. Huntera.

The Secretary read a letter from Mr. C. A. Wilson, Corresponding Member, dated Adelaide, 27th of February, 1867, in which the writer gave the following account, on the authority of his brother, Mr. Theodore Wilson:—"One day in December last, while stopping for a while under a tree at Cockatoo Valley, I saw a centipede actually slain by the heat. He dropped from a branch of the tree under which I was standing, and immediately made off at a great rate to find shelter, but he unfortunately came upon a piece of sand which was so intensely hot that he could not make any headway; his pace became slower, he turned about and savagely bit the leaves and sticks near him, then struggled, turned on his side, and gave up the ghost. In a minute or two he was shrivelled up like a piece of bark. I felt the sand where he was; it was so hot that it would have blistered my fingers had I kept them there a short time." Mr. C. A. Wilson also announced the discovery, by Mrs. Kreusler and Mr. Odewahn, of

Gawler, of a Stylops of the genus Xenos, being the first time that a Strepsipterous insect had been detected in Australia.

Mr. Frederick Smith had received from Mr. F. G. Waterhouse, of Adelaide, and exhibited to the Meeting, specimens of Paragia decipiens, upon which the Xenos was parasitic, and read the following note:—

"In the Transactions of the Society (2nd series, vol. v., p. 127) will be found a paper on the geographical distribution of the Stylopidæ: it is there shown that aculeate Hymenoptera from all quarters of the globe have been attacked by some members of that parasitic family; it also appears to be proved that these attacks are most general among the genera of the families of Fossores and Vespidæ. Among the Apidæ these attacks are confined to the Halicti and Andrenidæ; it is true that the genus Bombus has been mentioned as having been subject to attack, but this circumstance requires confirmation. Numerous instances have been recorded of attacks on species of the genera Sphex and Pelopæus, but they have been observed to occur most frequently among the Vespidæ. Stylopized Hymenoptera have been found in Europe, India, China, Celebes, Mauritius, Gambia, Brazil, Chili, North America, and Canada, and a single instance has been noticed in Tasmania, but at the time of the publication of my paper (1859) no instance of attack had been discovered in Australia. A recent communication from that country has been received by Mr. Waterhouse, announcing the discovery of an hymenopterous insect attacked by one of the Stylopidæ. The next in question is the Paragia decipiens of Shuckard: it was taken by Mrs. Kreusler on the Gawler River, Adelaide, South Australia: specimens of the wasp were forwarded by letter; the Stylops is described as having four-jointed furcate antennæ, belonging probably to the genus Xenos, or to a genus closely allied. This is, I believe, the first notice of the capture of one of the Stylopidæ in Australia. Of the four specimens of Paragia sent, number one has the remains of a male pupa-case beneath the third segment of the abdomen; the second and third specimens are similarly attacked; the fourth specimen has portions of two male pupa-cases beneath the third segment. It is rather remarkable that no female Stylops is found, as in British Hymenoptera they are found in the proportion of at least ten or twelve to one male."

Professor Westwood mentioned that a Homopterous insect captured by Mr. Wallace appeared to have upon it the remains of a Strepsipterous insect, and it would be within the recollection of Members that Herr Nietner had found stylopized ants in Ceylon.

Paper read.

Mr. Bates read a paper "On a Collection of Butterflies formed by Thomas Bell, Esq., in the interior of the Province of Maranham, Brazil." During three months of the year 1866 spent at the gold mines of Montes Aureos, Mr. Bell obtained no less than 364 species of butterflies: of these nine were described as new, and the paper contained some interesting observations on distribution, variation and mimicry. One new genus was characterized under the name of Pseudopheles, allied to Pheles and Esthemopsis.

9 SE67

New Part of 'Transactions.'

Trans. Ent. Soc., third series, vol. v., part 6, being the second part published in 1867, was on the table.—*J. W. D.*

TO CORRESPONDENTS.

Since the commencement of the 'Zoologist' I have never received, during a single month, so many complaints of the non-insertion of contributions as during the present month. I mention this with regret, but I cannot forbear expressing a hope that contributors will judge of the matter leniently, and make some little allowance for the difficulties of the case. In the first place, an Editor must claim the right of accepting or declining any communications he may receive: without exercising this right of selection a journal would soon expire from mere inanition. In the second place, as to priority of publication; it seems to me to be a judicious concession to those readers who are not contributors that the papers of present interest should take precedence of those of continuous or future interest, and those of scientific value to those which may be called merely amusing: *short* communications, also, because of their varied information as well as the smaller space they occupy, often appear more desirable than longer ones. In the arrangement of these details it is necessary to use despotic authority, the editorial office being purely autocratic. It seems to me an unkind as well as uncalled for assumption that communications are capriciously accepted or declined: it is obviously my interest to make the 'Zoologist' generally acceptable, and caprice has nothing to do with the matter.

Edward Newman.

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BIRDS' EGGS.

MR. J. C. STEVENS begs to announce he will Sell by Auction, at his Great Room, 38, King Street, Covent Garden, on Tuesday, June 18th, at half-past Twelve precisely, A COLLECTION OF RARE AND AUTHENTIC EGGS, formed last Season by Naturalists in Lapland and Sweden, and a few collected in Pomerania and the Marshes of Servia.

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